of trismus and chorea, without any favourable result, he has in some recent cases, by the dose of 3.5 grammes of the article, succeeded in causing an entire relaxation of the affected muscles, so that even under the application of severe pinching no spasm was re-excited. This result induced Dr. L. to make trial of the remedy as an antidote to the poisoning by strychnia, and with success. A theoretical deduction induces Dr. L. to conclude that the chloral does not act by removing the cause of tetanus, but simply by counteracting its effects, and that its use must, therefore, be persisted in so long as the muscular spasm continues to recur. Dr. L. advises the article to be administered in the form of enema, combined with a cupful of oatmeal mucilage. In emergent cases, however, he prefers its being given subcutaneously. Choosing a very pure neutral preparation, he introduces it under the skin by means of Pravaz's syringe, with its *platino-iridium* canula, which latter is so readily cleansed by raising it to a red heat. No abscesses resulted. In regard to dose, Dr. L. prefers, for the most part, small and divided doses, reserving the larger doses—2.5 to 5 grammes—when the appearance of a renewed attack of the disease is to be met, and then only once.—*Centbltt. f. d. Medicinisch. Wisschftn.*, Dec. 10, 1870. D. F. C.

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

8. *On the Duration of Phthisis Pulmonalis, and on Certain Conditions which Influence it.*—Dr. C. THEODORE WILLIAMS read a paper with the above title at a late meeting of the Royal Medical and Chirurgical Society (*Lancet*, Jan. 21, 1871). The object of the paper is to give some account of a thousand cases of phthisis selected from the private practice of Dr. Williams and the author, and to deduce the amount of influence which the conditions of age, sex, family predisposition, and origin exercised on the duration of the malady. The patients belonged chiefly to the upper and middle classes. The cases have been taken from the records of those who first consulted Dr. Williams between 1842 and 1864, a period of twenty-two years; the ground of selection being that each case has been at least one year under observation.

Sex.—The author, after explaining how the cases were recorded and exhibiting certain tables, states that 625 of the 1000 were males and 375 females.

Age.—Taking the sexes collectively, 41 per cent. were attacked between twenty and thirty, 25 per cent. between thirty and forty, 19½ per cent. under twenty, and 13¾ above forty. Considerable difference was found to exist between the two sexes as to the time of attack. Between twenty and thirty, the most common period of attack for both sexes, about 7 per cent. more females were attacked than males; and again, between ten and twenty, 11¾ per cent. more. On the other hand, after thirty, the reverse was the case. Between thirty and forty, the males exceeded the females by 11½ per cent.; and above forty, by 6 per cent. The average age when attacked was, for the males, twenty-nine years and a half; for the females, twenty-six years.

Family predisposition.—This term is substituted for "hereditary predisposition," in order to include brothers and sisters and first cousins in addition to those of the preceding generation; the principle being to include as instances of disease in a family all near relations derivable from a common stock. Family predisposition was traced in 48 per cent. of the patients; in 43 per cent. of the males, and 57 per cent. of the females. In the particulars which are given it is noted that nearly half of the cases had only brothers and sisters affected.

Origin and first symptoms.—In 315 cases, phthisis originated in, or followed closely after, the following diseases, viz., pleurisy and pleuro-pneumonia (143), bronchitis (118), asthma, scrofulous abscesses, fistula, hooping-cough, croup, scarlatina, measles, continued fevers, peritonitis, malformations of the chest, and injuries: 26½ per cent. of the whole number of cases were traced to inflammatory attacks (pleurisy, pleuro-pneumonia, and bronchitis); and of these patients, 14.2 per cent. were free from any suspicion of family predisposition. The origin of phthisis from inflammatory attacks is then dwelt on, and the symptoms indicating the conversion of pleuro-pneumonia and of bronchitis into phthisis sketched, and the more general recognition by medical men of their common occurrence among both upper and lower classes is strongly urged.

Hœmoptysis was present in 57 per cent. of the patients.

State of lungs.—In describing the condition of the lungs, Dr. Williams explains why he adopts the classification of *stages,* and what extent of disease each stage is intended to include. In none of the cases is the evidence of physical signs alone accepted; in all it is amply confirmed by clinical symptoms. Two-thirds of the patients were in the first stage at first visit, 18 per cent. in the second, and 14½ per cent. in the third; 14 cases presenting the signs of other diseases on which those of consumption shortly supervened. One hundred and ninety-eight patients are ascertained to have died; the mortality of those who came in the third stage being about double that of those who came in the first. The average duration of life among the 198 who died was seven years and eight months and three-quarters; 21 of whom lived from fifteen to twenty-eight years after the first attack. Among the 802 living patients, the average is at present eight years and two months and a quarter; 246 have lived more than ten years, 65 more than twenty, 2 more than thirty, and 1 more than forty years.

An account of the present state of these patients is then given, and it is shown that 72 per cent. have regained their health sufficiently to follow their occupations; 28 per cent. are still invalids.

Dr. Williams then discusses the views of Louis, Bayle, Laennec, Andral, Fuller, Pollock, and other authorities as to the duration of phthisis, and attributes the long duration of the present cases to—(1) the early detection of the disease; (2) the perseverance with which the patients carried out the various healing measures recommended to them, whether medicinal, hygienic, or climatic. The influences of age and sex on duration are next considered; and on these points the author's statistics show that—(1) the later the time of attack the longer was the duration, this being more marked among the males than among the females; (2) that females are, on an average, attacked four years earlier than males; and (3) that among them the duration of the disease is one year and a half shorter, and the average age reached is five years and a half less than among males.

The conclusions as to the effect of family predisposition on duration are—(1) that it does not directly limit the duration of the disease; (2) that it precipitates the onset of the disease, thus shortening the duration of life; (3) that it affects females more than males.

The influence of the inflammatory origin on the duration of phthisis is next considered, and the author concludes that cases arising from pleurisy or pleuro-pneumonia enjoy a longer duration than the average, such extension amounting to at least a year and a half or two years.

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9. *On the Relation of Tubercle to Inflammation.*—Dr. W. Moxon, Assistant Physician and Pathologist to Guy's Hospital, in his lectures on analytical pathology (*Med. Times and Gaz.*, January 21, 1871), expresses the following views on this subject:—

"If you see only small tubercles in a lung, you are content to say they are tubercles, and leave out of account the question of inflammation. They are tubercles, and you would no more care to inquire whether they are, nevertheless, inflammation, than you would care, having recognized a psoriasis, to ask whether it was an inflammation. It is a psoriasis. But, in some cases, you find that, though some tubercles are small knots of firmish consistence, you see in the same lung other patches of larger size, and others yet larger; so that from the little tubercles to the large patches there are intermediate gradations. Now, the large patches are granular, and sink in water, and are softish, breaking down easily when pressed, and exuding a yellow-looking opaque juice when so crushed down—and, in short, they have all the qualities which characterize the so-called gray and red hepatizations of the lung in acute pneumonia. Then arises a great difficulty—for the tubercles have pneumonia in such a relation that you cannot but see that the one is the cause of the other.

"I say you have pneumonia with the tubercle; and, indeed, there is no doubt that the characters (in the cases which I am referring to) and state of the larger masses are, in all essential points, the same as those in pneumonia arising from other causes.

"Now, you cannot think the pneumonia indifferent to the tubercle; you must allow some relation between them; and these are the questions that arise—1. Does the tubercle *cause* the pneumonia, as one thing causes another and a different thing? 2. Does the tubercle *become* the pneumonia, by expansion of its area and diffusion of its influence over greater space in a less time?

"Those who hold the first view will say the tubercle has *set up* a pneumonia. Those who hold the second view will very likely, when pressed, say that the patch of pneumonic-like formation is '*really tubercle*,' a patch, not of pneumonia, but of soft 'diffuse tubercle.' Now, if these two views are allowed to conflict against each other, so that one is made to contradict the other, each makes the other absurd to its own satisfaction, and goes away overmuch satisfied with itself.

"For, if we look disinterestedly at the question, we shall see that its solution lies here—*that there is no such thing as the pneumonia or common inflammation, which is so easily assumed to be at hand* by those who would hold the first view, and say that tubercles set up that simple pneumonia. All pneumonias have their habits; there is no common pneumonia which has no special habits. There is no simple pneumonia to which other pneumonias stand in such relations that their peculiarities are additions to the characters of simple pneumonia, which simple pneumonia waits to apply itself around indifferent causes. The stock of simple pneumonia is plentiful in theory, but you do not find it in real lungs. In real lungs all pneumonias have their distinctive characters. *Every inflammation is intensely specific.* It is very much with it as with the tribe of cats. The lion and tiger are not common cats with additional lion and tiger peculiarities, any more than common cats are lions and tigers with common peculiarities. If we look over the pneumonias that occur in a year, we find that no pneumonia has the characters and distribution of the tuberculous pneumonia, except tubercles be present with it—that is, *except it be a tuberculous pneumonia.* It is quite a peculiar thing, and its characters, so far as they vary from the characters of other pneumonias, vary towards the characters of tubercles, and in any lung vary indefinitely towards those characters, so that at last you find them to be tubercles. I shall be told that Magendie and others have put mercury into the lungs, and made artificial tubercles with surrounding common inflammation. But I beg to say that I could easily have seen that these were not tubercles, and am quite willing to challenge any one to deceive me with such productions—they are only naked-eye-deceiving models of tubercles. Besides, he never made anything like the expanded formations of pneumonic phthisis, of whose graduation into tubercle I have been speaking; nor can they be made. He produced the pneumonia of mercury's irritation, which is a different-looking pneumonia, and a different pneumonia from phthisical pneumonia.

"In this discussion of the question, I have purposely avoided using the term inflammation. I have used the word pneumonia, because it will probably carry with it the signification of the produced matter due to the inflammatory change in the lung. From what I have already said on hypertrophy, you know what I should say if the question of inflammation is brought as an alternative to tubercle. I should say the question is an unmeaning question—it is not right to say a stupid question; it asks what cannot be answered, unless you mean by it—did the phenomena of pain, heat, swelling, etc., which are the true and only meaning of inflammation, accompany the tubercle? This they certainly do sometimes; perhaps always. It is affirmed, I believe correctly, that *the formation* of tubercle always goes with an augmented heat of the body, ascertainable thermometrically.

"The formation of a tubercle is as much inflammation as the formation of a herpes or a lichen, and as little; and as you get an inflamed lichen or psoriasis, so you may get an inflamed tubercle. In the case of the cutaneous disease, you would think any one trifling with your time if he should ask whether the inflamed psoriasis is a psoriasis *plus* an inflammation; and so I think you should think of any one who asks the question in reference to tubercle. It is as much tubercle as it was before when it is inflamed; but now it is so intense that the phenomena of pain, etc., the vital reaction to excessive change, are brought out along with the vascular phenomena which evince, characterize, and, indeed, create them—which vascular phenomena are the old and present and future import of the word 'inflammation'—the subjects of the treatment directly addressed to inflammation, and the causes of such phenomena, additional to the cell-production of the tubercle, as are due to the vessel-dilatation, blood-stagnation, fluid-oozings, etc., that the vascular reaction or inflammation brings to pass.

* * * "When you ask 'What is *inflammatory formation?*' you are told it is cell-growth; and when you ask, What is tubercle? you are told it is cell-growth; and so tumour, and a lot more. The viewing of these different things with sufficient eye-power by the microscope, evinces this beyond doubt or question. The foundation of all these is one and the same thing—the production of nucleated cells, which grow when they are produced. This is common to them all, like vibrations to light and sound; yet the result of these growths is to produce here a tubercle, and here a patch of lymph, and there a tumour; and clinical experience—that is, the watching of the phenomenal results of the cell-growth—evidences the differences between them. Clinical experience, as it were, further analyzes the life of cells, as the senses analyze vibrations; but what it is that, added to the cell-growth, makes it become tubercle, or tumour, or lymph, you do not know, and never will know. It is very likely that your mind is not able to frame the question which anticipates the solution of the problem."

10. *On the Production of Hemorrhage, Anœmia, Œdema, and Emphysema in the Lungs by Injuries to the Base of the Brain.*—Dr. Brown-Séquard contributes to the *Lancet* (Jan. 7, 1871) a very interesting paper calling attention to his recent experiments on the effect upon the lungs of injuries of the brain. "In making experiments on the comparative lethality of injuries to the left and the right side of the brain, I found, a year ago, that one of the most frequent causes of death, when it does not occur immediately or very soon after wounds of the brain, in guinea-pigs especially, was pneumonia. I was led by this fact to perform a large number of experiments to ascertain the immediate effects of an injury to the brain on the lungs. The results obtained were startling; in almost all cases of injuries by crushing or section of the pons Varolii ecchymoses were found in the lungs. Sometimes the whole lung was crowded with effused blood, and real pulmonary apoplexy existed. In some instances the effusion took place in the bronchial tubes. Injuries to other parts of the base of the brain, especially the crura cerebri and the crura cerebelli, sometimes are followed by the same effects on the lung, and it is extremely probable that a slight pressure upon the pons Varolii by effused blood is sufficient to produce it. . Injuries to the medulla oblongata and to the spinal cord have but very rarely (only in three or four experiments out of a great many) caused an effusion of blood in the lungs. This is the more remarkable that, without any doubt, the nerve-fibres going from the pons Varolii to the lung, which cause the rupture of the small bloodvessels in this viscus, pass through the medulla oblongata and the cervical part of the spinal cord. Many experiments have shown me that it is not through the par vagum, but through the sympathetic nerve, especially by its spinal roots, which throw themselves in the first thoracic ganglion, that the peculiar influence of the irritated pons Varolii exerts itself in producing a pulmonary hemorrhage.

"A hemorrhage is not the only immediate effect that can be observed after an irritation of the base of the brain by crushing or cutting; an anæmic condition, œdema, and emphysema can also be produced. Some small parts of the lungs are found perfectly white, and, according to the examination of a distinguished micrographer, M. Ranvier, who has kindly helped me in some of these researches, absolutely deprived of blood, no doubt through a spasm of the bloodvessels having emptied them of their contents. This may occur after injuries of almost all the parts of the base of the brain, but especially the pons Varolii. Not so as regards œdema, which principally appears after an injury to the medulla oblongata. Looking at a lung in which such an alteration exists, one observes one or several grayish spots, generally circular, and of the size of the head of a pin, protruding as a part of a sphere from the surface of the lung. This pearl-like part of the lung, according to my able friend, M. Ranvier, contains a good deal of serum, and its minute bloodvessels are filled with the white corpuscles of blood, and free from red corpuscles. This is, indeed, a most wonderful fact, and the more so that this change in the contents of the pulmonary capillaries is immediate.

"The last effect I intend to mention of an injury to the base of the brain on the lungs is already known to experimenters, I mean emphysema. But what I will state about it is a new and very remarkable fact, which does not agree with the reigning theories of the mode of production of emphysema. It is that this morbid condition can appear when not a single respiratory movement takes place, after an irritation of the base of the brain either by crushing or cutting.

"When I publish the details of my experiments on the influence of injuries to the brain on the lungs, I will show that, in man, diseases of or injuries to the brain very frequently produce organic alterations in the lungs. I will content myself here, to prove the frequency of that morbid influence of the brain on the pulmonary organs, to state that, out of 188 cases of organic diseases of the brain recorded by Calmeil, there was a morbid state of the lungs, especially inflammation, in more than sixty cases—*i. e.*, in one case out of three. I have no doubt that many patients attacked with brain diseases die from a disease of the lungs caused by that of the central organ of the nervous system."

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11. *Pathology of Fatal Hæmoptysis in Advanced Phthisis.*—Dr. R. D. POWELL brought before the Pathological Society of London (Nov. 15, 1870) a series of specimens and a table of fifteen cases which had occurred at the Brompton Hospital, illustrating the pathology of fatal hæmoptysis in advanced phthisis. Specimen one consisted of the lung of a man, aged 25, who had died, while under Dr. Powell's care, from exhaustion, three days after his first attack of hæmoptysis. Both lungs were the seat of lobular pneumonic consolidations in all stages of degeneration, and in the right lung there were some old smooth-walled cavities, the largest of which, situated at the base, contained a sacculated aneurism, as large as a small walnut, of a secondary branch of the pulmonary artery. The aneurism had thin, brittle walls, contained few coagular lamina, and had ruptured by a small opening. Specimen two showed a small sacculated aneurism situated in the wall of an old indurated quiescent cavity, which had given rise to abruptly fatal hæmoptysis, in a patient of Dr. Symes Thompson, at the Brompton Hospital. This patient had been ill for several years, but had never had hæmoptysis before. Specimen three had been removed from a patient under Dr. Powell's care, who had died suddenly of hæmoptysis on October 12, 1870, having had previous attacks of copious hæmoptysis in January and September. This specimen showed a large thin-walled cavity, the surface of which was in a state of active ulceration, which had led to extensive exposure of large vessels, and erosion of their walls. From one of these branches of the pulmonary artery the hemorrhage had occurred; and on the same vessel, a little higher up, a small aneurism was situated, partially obstructing a bronchus. Specimen four was removed from a patient of Dr. Pollock's, who had died from rapid tubercular phthisis, but had never had any important hæmoptysis. This specimen, like the preceding, showed a large cavity in a state of active ulceration, leading to extensive exposure and erosion of vessels. It illustrated the long-continuing patency of large vessels in the walls of cavities, and the formation of fibrinous coagula in them, attached to the side first exposed, and invaded by the ulceration, and the subsequent removal by the same process of the vessel-wall, leaving the coagulum bare while the vessel still remained patent. Of the fifteen cases of fatal hæmoptysis in

the table (including three of the above cases), twelve had resulted from rupture of the pulmonary artery in a cavity, preceded in eleven by dilatation (five sacculated, six varicose), and in one case from ulcerative erosion. In three cases the source could not be discovered. Dr. Powell regarded old-standing unilateral cases of phthisis with quiescent cavities as most favourable for the formation of aneurisms or ectasias of branches of the pulmonary artery; cavities in a state of active ulceration are most liable to cause fatal hemorrhage by erosion of the vessel. In both these cases the artery was invaded on one side only, the other being still in connection with living tissue. When a vessel was surrounded by pneumonic consolidations it was more likely to become obliterated. Dr. Powell referred to a paper by Dr. Rasmussen, in which eight cases of fatal hæmoptysis were related—four from sacculated aneurisms, and four from dilatation of pulmonary branches.—Dr. C. T. Williams had seen the vessels sometimes dilated and thin-walled—sometimes almost calcareous. Was there any change in the vessels in early consolidation?—Dr. Bastian thought it was not difficult to account for fibroid change in the coats of the vessels. In the brain this was generally so. With an old cavity and chronic induration, he could understand the vessels partaking of the change, and dilating or giving way where there was no support.—Dr. Moxon had failed entirely in discovering the source of hemorrhage in two suddenly fatal cases. One was a girl who died in five minutes; yet he could find consolidation merely. It was a matter of surprise that Dr. Powell's cases should be of the kind they were, as in such it was usual for the vessels to contract. He would rather expect to find such change in rapidly fatal cases.—In reply to Mr. Arnott, Dr. Moxon said he had pursued his search for the source of the hemorrhage systematically till the lung was reduced to exceedingly small pieces.—*British Med. Journal*, Nov. 15, 1870.

12. *Vesicular Emphysema of the Lungs.*—Dr. O. Bayer (*Arch. d. Heilk.*, xi. 1870) verifies the statement of Wagner and Villemin, that the earliest histological change to be observed in cases of pulmonary emphysema is an increase of the interstitial granules (stroma). In the majority of cases he admits, however, this increase is only apparent, inasmuch as in the walls of the most developed cellules there will, in some cases, come into the focus of the lens an unexpected increase in the number of granules. In many chronic cases of emphysema increase of granules is unquestionably one of the antecedents of the attack. Nevertheless, Dr. B. considers the anomalous formation of granules to be not so much a cause as a result of disease of the vesicular ectasia. The cause of the enervation of the lungs—which, as in other organs, is not always preceded by any apparent histological change—Dr. B. considers it to be the result of the disturbance of the pulmonary circulation. It can, also, be caused by continued distension of the cellules of the lungs, by the presence of capillary bronchitis, by disease of the neighbouring portion of the lung, by a disturbance of nutrition, generally, by dilatation and loss of elasticity of the pulmonary artery, by atheroma of the aorta, and terminal branches of the bronchial arteries. The more intense the disturbance—circulatory and nutritive—the more readily will mechanical influences become causes of vesicular pulmonary emphysema.

D. F. C.

13. *Bronchial Asthma—Bronchial Spasm in Children.*—Dr. L. M. Politzer, from the study of five cases of a peculiar spasmodic affection of the lungs which he has met with during the few past years, feels authorized to pronounce it a disease appertaining especially to the age of childhood. He describes it to be an essential, idiopathic affection of the muscles of the bronchi, and of the nerves which regulate their movements; as a consequence, it may be, of bronchial catarrh. The following are its diagnostic phenomena. The most intense dyspnœa, enduring for eight to ten or twenty hours; such as we observe in the latter stage of croup, pneumonia, pleurisy, bronchitis of the larger and smaller bronchial ramifications, pulmonary œdema, etc. Sudden occurrence of such dyspnœa, without increase or rather with diminished temperature of the surface; or if a catarrh with fever had preceded the asthma, upon the occurrence and during the continuance of the intense asthmatic dysp-

nœa, the fever ceases; an unusually loud, fine, whistling respiratory sound is to be detected upon auscultation, with a diminution or entire absence of respiratory râles; even though they had previously been present during the continuance of a preceding bronchitis, they disappear during the attacks of dyspnœa, or are concealed, at least, by a whistling sound. There is but slight cough, mostly laryngeal. It increases in strength during the intervals of the bronchial spasm, so long as there remains an accompanying pulmonary catarrh. The spasm and dyspnœa, disappear suddenly, after continuing for a period of eight, ten, twenty, or twenty-four hours; appearing again, somewhat later, for the most part without any change of character. From croup, with which bronchial asthma has a close resemblance, it is to be distinguished by the loud whistling respiration often combined with fine crepitant râles, continuing unchanged throughout the entire attack, while in croup the paroxysms of intense dyspnœa occur at intervals. We are also to take into account the early occurrence of the deoxygenation of the blood, and the non-febrile character of the asthma. In regard to the therapeutic management of bronchial asthma, Dr. P. recommends quinia in large doses, musk, and especially the chloro-bromate, from the use of which he states that he has seen great advantage ensue in nervous diseases generally.—*Centralblatt f. d. Medicinischen Wissenschaften*, Oct. 15, 1870, from *Jahrb. f. Kinderheilk.*, N. F., III., 1870. D. F. C.

14. *Ulceration of the Frœnum Linguæ in Pertussis.*—Dr. WM. MACCALL, of Manchester, records (*Glasgow Med. Journ.*, February, 1871) the results of his investigations in regard to the occurrence of a peculiar ulceration on or near the frænum of the tongue in children suffering from pertussis. This characteristic ulceration was noticed in Germany as early as 1844 by Amelung, Braun, Bruck, Zitterland, Liersch, and Schmidt, and ten years later by Gamborini, in Italy; but has not been much noticed in Great Britain or in this country. Dr. Maccall, in an epidemic of pertussis in Manchester in 1869–70, found this ulceration in 44 per cent. of the children who were brought to the Dispensary of the Children's Hospital. This proportion he thinks too small, as a number of the cases in which the ulceration was absent were examined only in the first week, and it may have occurred at a later period. Gamborini found it in 56 per cent.

The period of the disease at which this affection appears varies much, but the most usual time seems to be about the second week. It may, however, occur very early; for example, Dr. M. found it in one case where the cough was only of two days' duration, in two cases of four days', and in three cases of five days'. In these and some others it was present before any hooping had been observed—the cough being, however, distinctly paroxysmal. On the other hand, among the cases in which it did not exist at the first visit, but became manifest subsequently, he found the date of commencement to be in two cases as late as three weeks, in two cases four weeks, and in two cases five weeks. When once formed, the ulcer generally continues till the disease begins to decline and lose its paroxysmal character, and then heals spontaneously. If the duration of the pertussis be protracted, the ulceration may thus continue for a long time, and without as a rule increasing much in size. In several cases it was found fully three months, and in one case six months after the beginning of the disease.

Dr. M. regards this ulceration as not a specific eruption, but to be due to a mechanical cause. "In most children suffering from pertussis, the tongue is protruded from the mouth, and the frænum becomes stretched and rubbed in a slightly sawing manner upon the lower incisors during the succession of rapid, violent, expiratory efforts, with occasional imperfect inspirations, and the final *reprise*, which constitute the paroxysm. By the frequent repetition of this action, abrasion or vesication and then ulceration are produced.

"This idea of the causation is supported by other facts observed, which tend to show that the phenomenon is in some way connected with the presence of the teeth. Thus, it is very rarely—in my own experience *never*—found in children before the appearance of the teeth, although pertussis affects them as characteristically and often as severely before the period of dentition as after it. On the other hand, it may be present at the earliest age after the appearance of the teeth, several of the children in whom I found it being from eight to nine months, and two of them only seven months old. And further, if present at all in older children who have lost the lower central incisors, it is not on the frænum, but on some part of the tongue corresponding with the prominence of a particular tooth or teeth."

Dr. M. considers this ulceration to be important as a diagnostic sign in doubtful cases, its presence giving certainty to what would otherwise be only a probability.

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15. *Angina Pectoris.*—Dr. F. W. Moinet discusses (*Edinburgh Medical Journal*, January, 1871) the pathology of this disease, and expresses the belief that it is a paralysis occurring in and depending on a weakened heart, as no other theory can account for the symptoms and history of the disease.

He recommends the following treatment:—

"During the paroxysm the treatment most efficacious in relieving the symptoms is that by diffusible stimulants and opium, hot brandy-and-water, sinapisms to the feet, and placing the hands in hot water. In the functional cases, treatment must be directed mainly to the stomach and nervous system. Tonics, such as iron and quinia, and regular exercise, will be found most beneficial. Trousseau in his work mentions some good results he obtained by galvanism; but from the reports of the cases operated upon, they must have been functional, as it is only in these cases that cures can be effected. Still, we are inclined to think that galvanism carefully, and at first gently, applied, might be of some service even in organic angina, by giving tone and stimulus to the heart's muscular fibre, and that, at least, it is worthy of a trial. Another remedy we would suggest is bleeding, for by relieving the languid and stagnating circulation, you ease the heart, and at the same time give it a stimulus and opportunity to recover itself, especially when the paroxysm is a protracted one. Nitrite of amyl is also sometimes found useful; it acts as a stimulant—its speedy action being due to its being administered by inhalation—and not by relieving tension, as Dr. Brunton affirms in his paper in the *Lancet* of 5th March, in which he relates a case of angina pectoris in a man, æt. 26, and argues that the arterial expansion is diminished, and the tension correspondingly increased during a paroxysm of angina, the smallness of the pulse being due to its hardness, and that by the nitrite of amyl the expansive movement is increased by relieving the muscular walls of the arteries; but in angina the pulse is not hard, there being no tension, only relaxation of the arterial coats, and the amyl by exciting the heart to increased work by its stimulating properties, the blood is thrown into the vessels with increased rapidity, so the arterial expansion is increased, but not by diminishing tension, the arteries being put to their full power of expansion, but not beyond it.

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16. *Impairment or Loss of Power of Speech.*—Dr. J. S. Bristowe read a paper before the West Kent Medico-Chirurgical Society, entitled Cases illustrative of the various forms of Impairment or Loss of the Power of Speech, with remarks. He divided the mechanism of speech into two parts: that furnished by the larynx, and that furnished by the mouth. He then proceeded to consider aphasia under three heads. 1. That due to a mental defect independent of any affection of the organs of speech, to which the term amnesia, or amnestic aphasia, has been applied. Particulars of four cases illustrative of this form were given, in all of which there was paralysis of the right side; in other words, the left side of the cerebrum was diseased, which to a certain extent confirmed the views of Dax and P. Broca. These writers associate aphasia with disease of a definite part of the cerebrum, viz., the posterior part of the third frontal convolution. Dr. Bristowe thought it certain, however, as Trousseau maintained, that aphasia in some instances is obviously the result of disease of the right hemisphere, and that it was equally certain that the dependence of aphasia on disease of a particular convolution, whether in the right or left side, was at present very far from certain. 2. That form in which, without there being any apparent mental defect, and without there

being any paralysis of the organs of speech, the patient loses the power of speech absolutely. Particulars of a very interesting case illustrative of this form were given, in which Dr. Bristowe succeeded in teaching the patient to speak. A full account of this case is published in the last volume of the *Transactions of the Clinical Society*. Dr. Bristowe thought that cases of this kind lead to the conclusion that speech, when once acquired, is a purely reflex phenomenon, as are the acts of deglutition or respiration; that there is some ganglionic centre intermediate between the cerebrum (which thinks and wills) and the nuclei of the motor root of the fifth, the portio dura, and the hypoglossal nerve (whence the motor power of the organs of articulation is derived), intimately connected by nerve-fibres with all these parts; that this centre, when the mind wills to express itself in words, acts as its agent in the matter, and directs the necessary combined impulses of the nerve-nuclei, upon which the combined movements essential for the production of each articulate sound and each articulate word depend; and that aphasia here is due to disease affecting this co-ordinating centre. 3. That in which the nerves of speech are paralyzed, either from disease in some of the trunks, or from disease affecting their nuclei of origin. Particulars of one case illustrative of this form were given. The most remarkable examples are those furnished by disease of the medulla oblongata, and by that peculiar form of paralysis described by Duchenne and Trousseau, and which the latter terms glosso-pharyngeal paralysis. Dr. Bristowe also stated that cases of aphasia are certainly met with in which the above varieties of loss of speech are combined in a greater or less degree.—*Brit. Med. Journal*, Feb. 4, 1871.

17. *Addison's Disease.*—Dr. SILVER exhibited to the Pathological Society of London (Nov. 15, 1870) the supra-renal capsules of a man, aged 24, who had died of Addison's disease. The man came under his care at Charing-Cross Hospital, in June, and he afterwards became an in-patient. He had been growing dusky for two years; previously to that he had been fair. The cause was rendered obscure by an attack of ague two years before. He was very weak, complained of inability to take a deep breath, and had palpitation. Some time before death, he showed cerebral symptoms. He died in the night. After death the vessels of the brain were found to be loaded, the ventricles containing more fluid than ordinary, and the corpora striata softened. The lungs were tolerably healthy, the left apex slightly adherent, and both containing masses of obsolete tubercle. The spleen was normal. The supra-renal capsules were adherent, and completely converted into a calcareous mass on each side. Dr. Silver considered that the case tended to show the connection between Addison's disease and tuberculosis. He also alluded to two similar cases which he had encountered in visiting country hospitals.—*British Med. Journal*, Dec. 3, 1870.

18. *Addison's Disease and Sclerodermia.*—Dr. J. M. ROSSBACH, Würtzburg, in an interesting paper in *Virchow's Archiv* (September, 1870), discusses the theories which have been advanced to account for the symptoms of Addison's disease. At first the disease of the supra-renal capsules was considered the primary affection, but certain facts were soon found to be opposed to this. Thus all the symptoms of Addison's disease have been observed in cases where no lesion of the supra-renals was discovered after death; while the capsules have been found diseased, without the symptoms of Addison's disease having existed during life. Then, also, careful examination has shown that the capsules do not possess a special nervous apparatus; and, lastly, excision of them in animals does not produce the symptoms of Addison's disease. The next theory was that the cause of the symptoms was an affection of the sympathetic nervous system, but such an idea has no basis in the known functions of the sympathetic, and, moreover, the semilunar ganglion has been extirpated in animals without the production of the symptoms of Addison's disease. In support of a theory of his own, the author then brings forward certain facts. In the great majority of reported cases there was some psychical disturbance, such as loss of intelligence, loss of memory, great irritability, &c. Addison

himself, in his summary of the symptoms, notes a peculiar change of the mental action as a constant symptom. Along with this there were present in numerous cases symptoms also belonging to the central nervous system, such as paralysis, epilepsy, &c. In all cases, also, great anæmia was a prominent sign, and this occurring long before the peculiar set of symptoms usual in later stages. Again, the causes of the disease point in a large number of cases to disturbance of the mind, as by grief, &c. The pigmentation of the skin is not so important a sign as is usually supposed—it may be absent in Addison's disease; at the same time certain facts connect sudden pigmentation of the skin with disturbance of the mind. Having brought forward these facts, the author then goes on to draw an analogy between Addison's disease and hysteria. Both present prominent nervous symptoms, while in the one case the uterus is very commonly coincidently affected, and in the other case the supra-renal capsules. The author concludes that Addison's disease is really a neurosis—that is to say, a functional disease of the entire nervous symptoms, which is not as yet anatomically recognizable, and which stands in close but not necessary relation to disease of the supra-renal capsules; the disease is characterized by psychical disturbance, extreme anæmia, extraordinary sickness, and very frequently by abnormal pigmentation of the skin. By this definition he would take Addison's disease out of its present isolated position, and group it along with hysteria, as "diffused neurosis with unknown anatomical basis."—*Glasgow Med. Journ.*, February, 1871.

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19. *Temporary Glycosuria as a Sequel of Cholera.*—Mr. William Sedgwick, at a late meeting of the Royal Medical and Chirurgical Society, remarked that the first and albuminous urine passed or withdrawn after the usually prolonged suppression of the secretion was usually deficient in urea, and free from sugar; and that the subsequent temporary glycosuria was preceded by the occurrence of a blue colouring matter. Sugar in the urine occurred not, as a rule, in the first urine secreted after suppression, but subsequently to the occurrence of albumen; and whilst there was a relative deficiency of urea when albumen was present, sugar was associated with urea in excess. The production of the blue colouring matter in the urine of patients suffering from cholera was very closely associated with the development of glycosuria; the occurrence of the sugar in the urine in such cases appearing to be a somewhat later stage in a series of pathological changes, apparently traceable to one common origin. Attention was directed to the frequent occurrence of a blue colouring matter in the urine in many other diseases, which, like cholera, could be more or less directly referred to the alimentary canal; and, as sugar has been found in the same cases, those two abnormally increased, if not altogether abnormal, constituents of the urine were perhaps derived from the same source. In reviewing the pathology of the urine in cholera, the chief facts to which attention should be directed, with reference to the occurrence of glycosuria, were—the suppression of the urinary secretion as a primary result of the disease, with arrested formation of urea; albuminuria, with deficiency of urea; the presence of a blue colouring principle; and, finally, diuresis, with excess of urea and sugar in place of albumen. The presence of sugar during convalescence, when albumen was no longer present, suggested that the temporary glycosuria of cholera might be due rather to the progress of reparation than of destruction, and that it was, as it were, the result of an excess of restorative effort. In diabetic patients, during fever, or during the last agony, sugar in the urine was apt to be replaced by albumen. Temporary glycosuria, like the previous suppression of urine, had no claim to be regarded as an exceptional phenomenon characteristic of cholera; on the contrary, it occurred during convalescence from other forms of acute disease, in which it was often associated with the previous development of a blue colouring principle. It also occurred apart from disease, as a physiological condition during certain stages of development, and at certain epochs of life; and it could be experimentally produced. In all such experiments, the primary effect produced must be on the vascular system, to which the branches of the sympathetic nerve were distributed, and any effect produced on other parts of the organism must be secondary. The fact observed

by Eckhardt, in 1867, of the absence of sugar from the urine after section of the splanchnic nerves, taken in conjunction with the fact observed by Monreau in 1868, that section of those nerves was followed by an intestinal flux possessing the same character as the flux of cholera, indicated very clearly the direction in which the inquiry should be pursued. For, when the neuro-paralytic condition of the digestive canal so produced was compared with what occurred after the influence of the central portion of the sympathetic nervous system had been artificially increased by the application of galvanism or electricity to the part during life, as shown in MM. Linati and Caggiati's experiments, it would be found that the results then obtained were essentially opposed to those which followed arrest or diminution of that influence, either from section of the nerves or from cholera. The temporary glycosuria observed in all the various cases cited might be regarded as a consequence of long-continued and immoderate secretion, consequent on a previous diminution or arrest of the influence of the sympathetic or vaso-motory nervous system, which acted as the moderator of secretion in virtue of its action as controller of the circulation. The author had been led to infer that all secretion was associated with saccharine transformation; and that whilst, on the one hand, an excess of secretion was accompanied by a corresponding excess in the formation of sugar and consequent glycosuria, a moderate exercise of secretory function was, on the other hand, accompanied by a corresponding moderate formation of sugar, which could be disposed of in the system; and that it was only when the blood contained sugar in excess from such causes as those which had been already referred to that some of it was eliminated by the kidneys. Consequently, in those cases of cholera which terminate favourably, and in which glycosuria had been observed to occur during convalescence, the subsequent disappearance of sugar from the urine might be accepted as evidence in favour of the normal balance of organic function having been satisfactorily restored.—*Brit. Med. Journ.*, Dec. 24, 1870.

20. *Diagnosis by Examination of Urine in Obscure Forms of Urinary Disease.*—SIR HENRY THOMPSON calls attention (*Brit. Med. Journ.*, January 7, 1871) to a mode of obtaining a diagnosis in some rare and doubtful cases of disease of the urinary organs, when all other modes have failed. Thus, for example, we not seldom meet with a patient whose urine, usually containing a small or varying quantity of blood and pus, presents more or less albumen, but relative to the precise origin of which it is desirable to be certain. Some of the deposit produced is of course due to the admixture named; and while he may be right in believing the quantity to be equal only to the blood and pus in the urine, we cannot be certain whether some of it may not be due to renal changes. In such a case, the other signs, and the symptoms also, are often insufficient to enable us to say whether they are due solely to vesical disease or to pyelitis, or whether there may be some renal affection, not to say constitutional albuminuria, complicating the conditions named. On the other hand, the symptoms may apparently indicate only an affection of the bladder; there may be no symptom of disease involving any higher portion of the urinary tract; nevertheless, the experiment to be described may prove the kidneys to be almost solely the seat of the malady. Few cases present more of obscurity than some of those with the characters thus briefly indicated.

The proceeding may be described as follows. A No. 6 or 7 flexible catheter is introduced into the bladder while the patient is in the upright position, and the urine drawn off is placed in a vessel apart. By means of an elastic gum-bottle containing a few ounces of warm water, the bladder is washed out two or three times, with about an ounce or two at a time, until the outflowing fluid is perceived to be quite clear. The catheter being left *in situ*, fresh urine from the kidney, untainted by any admixture, will now pass by drops into a test-tube placed to receive it; as a specimen, therefore, of true renal secretion, unqualified by vesical products, will be furnished in about five minutes, sufficing for a chemical analysis, and useful, to a certain extent, for microscopical observation. By this simple process I have been enabled to solve the question of disease of the kidneys in some cases in which hitherto doubt as to their implication existed; and have often had the satisfaction of demonstrating that the secretion obtained direct from the organs was absolutely free from any sign of disease, where they had previously been suspected to be the seat of grave mischief. But there is one source of fallacy on applying this test which is occasionally to be met with. An illustration of it exists at this moment in the case of a man now in my ward at University College Hospital. If the bladder easily bleed with instrumental contact, as occasionally happens, the process may produce a slight admixture of blood in the urine so obtained, barely enough to tint it, but sufficient, perhaps, to occasion a considerable deposit to heat and nitric acid. It should never be forgotten, in estimating these products, that, for equal quantities of blood and pus, the former produces a much more bulky deposit of albumen than the latter. Of course, then, this disposition to slight bleeding, as a result of the procedure, and any augmentation of albumen so caused, is, of itself strong evidence of vesical, rather than of renal disease. I should say, that the occurrence just named is one of rare occurrence.

21. *Diagnosis of Rickets.*—Dr. C. Currie Ritchie remarks, in a paper entitled "Clinical Observations on Rickets" (*Med. Times and Gaz.*, Jan. 7, 1871), that, being at a loss as to the diagnosis between rickets and tuberculosis, he was led to observe the morning and evening temperatures of eleven children for eight days. These were all cases of uncomplicated rickets, and were taken by the same thermometer, the bulb of which was retained in the rectum for five minutes at each observation. The ages of the children ranged between ten months and three years, and the morning temperatures were all taken after breakfast, between 9 and 10 A. M., and the evening temperatures all between 9 and 10 P. M. The respirations and pulses were not taken, as they are subject to so many variations in children, and, besides, they seem to bear no definite relation to normal temperature. The mean result of the eighty-eight morning observations thus obtained was 99.13° Fahr., and of the eighty-eight evening observations 97.44° Fahr.

On comparing these results with the average results of the normal temperature of children by Roger and Finlayson, we find that the morning temperature is lower in rickets by 0.54° (after adding to his axillary temperature 0.7°, the difference between rectal and axillary temperature) according to the former, and by 0.28° according to the latter observer. We also find that, as in the normal, there is a varying fall in the evening temperature in rickets—a most important diagnostic from tuberculosis, in which, as has been shown by Ringer and others, there is not only no evening fall, but there is a positive evening rise. This may be either higher, relatively, than the morning temperature, which may be nearly normal, or both may be high, with evening exacerbations, or both may be high, with exacerbations not confined to any one portion of the day.

22. *Intestinal Worms.*—Huber advocates the doctrine which ascribes, in part at least, the disturbance to health resulting from the presence of worms (*ascarides lumbricoides*) in the intestinal canal, which was formerly and is still by many physicians believed to be the result solely of their mechanical action, to an acrid effluvium emanating from the body of the parasite. He found, after an hour spent in the examination of some dozen worms, that he became attacked with a most troublesome itching of his head and neck, followed by the appearance by a well-developed eruption in patches, the smallest of which were on the forehead. The right ear became greatly swollen, and a considerable discharge took place from the external meatus, lasting for an hour. From the ear there extended, over the right side of the head, a troublesome sense of beating; there was a catarrhal condition of the conjunctiva of the eye, with intense itching—chemosis of the right eye. After a few hours these symptoms disappeared. A similar observation is reported by Miram. There is probably required a considerable accumulation of worms in the bowels to give rise to symptoms of like severity. Huber does not refer, with Kuchenmeister, the source of this acrid principle in intestinal worms to their vesicular muscular termina, but to their subcutaneous tissue. He denies that the

acrid emanation is supplied in greater amount in the female than in the male. According to Leuckart, insects taken in with the food are the media by which the larvæ of worms are introduced into the intestines, and Huber remarks that by no article of food used by man, especially during childhood, are so many insects taken into the stomach, as by butter.—*Deutsches Archiv für Klin. Med.*, VII., 1870. D. F. C.

23. *Rhinosclerma.*—A case of this affection is described by HEBRA in the *Wiener Med. Wochenschr.*, 1870, No. 35. He had previously reported 10 cases, all of which were essentially alike, in their development and progress. In the case just refered to, the disease commenced by a thickening of the integuments of the under part of the nose and the upper portion of the upper lip. The thickened parts were hard to the touch, and the skin covering them assumed a brownish-red colour. The patient experienced a sensation of diminution in the opening of the nares. There was no pain. The progress of the disease was very slow, the original type of the induration remaining unchanged. There was no formation of purulent or ichorous matter. The different portions of the tegumentary induration grew in size somewhat independent of each other, giving to the intumescence a kind of knobbed appearance. If one portion be treated with caustic potash, it will be destroyed, but the immediately surrounding portions, even though they may be involved in the inflammation resulting from the use of the caustic, remain after the subsidence of the inflammation unchanged. Hence the complete destruction of the indurated part requires many repetitions of the caustic. In one of his early cases, Hebra removed the knobs with the knife. The excised portions exhibited, under the microscope, increase of, with thickening of the cellular tissue.—*Centralblatt f. d. Medicin. Wissenschaften*, Oct. 8, 1870. D. F. C.

24. *Eczema Marginatum.*—In the *Wiener Med. Wochenschrift* (1870, Nos. 44, 45), Dr. ISID. NEUMANN treats of this form of cutaneous disease. Hebra gave the name eczema marginatum to an affection which makes its appearance on the genitals, about the anus, on the inner surface of the thighs, and the surface of the abdomen, often in the axilla, in the form of circular patches, of a brownish-red colour. These patches spread from their circumference outwards, while they heal at the centre. According to Köbner the disease is due to a germ similar in its nature to that which gives rise to *herpes tonsurans.* Bärensprung and Burchardt describe a cutaneous affection running a very similar course with the one under consideration, as an *erythrasma.* In the course of a discussion that for many years has been going on between Hebra, Köbner, Neumann, and Peck, Hebra became finally convinced that the *eczema marginatum* might probably owe its origin to a cryptogamic germ, though, at the same time, he could admit that the fact of the germ being the cause, and not a consequence merely, of the disease was not established with certainty, but at the same time denying positively that there is any evidence of the supposed identity of the disease named by him *eczema marginatum* and *herpes tonsurans.* Dr. Neumann examines the several points embraced in this controversy by what he believes to be the legitimate results of his own observations, and arrives at the following conclusions:—

I. In cases of inflammation of the skin with destruction of *epithelium* (*intertrigo*), there may be developed cryptogamic germs as in ordinary eczema, by the presence of which the case becomes converted into one of eczema marginatum.

II. An existing germ disease, such as in herpes tonsurans or pityriasis versicolor, when favoured by its particular locality on the surface, may assume the form of eczema marginatum.

III. In the earlier stages of eczema marginatum germs are almost always to be detected. In inveterate cases they are usually absent.

IV. The germ element observed in cases of eczema marginatum may by effort at culture become changed into the penicilium glaucum or trichothecium. —*Centralblatt f. d. Med. Wissenschaften*, 1870, No. 46, Oct. 22. D. F. C.